

Name:
Period:

Date:
Worksheet: Boyle's Law

1. A gas occupies 12.3 liters at a pressure of 40.0 mm Hg. What is the volume when the pressure is increased to 60.0 mm Hg?
2. If a gas at 25.0 °C occupies 3.60 liters at a pressure of 1.00 atm, what will be its volume at a pressure of 2.50 atm?
3. To what pressure must a gas be compressed in order to get into a 3.00 cubic foot tank the entire weight of a gas that occupies 400.0 cu. ft. at standard pressure?
4. A gas occupies 1.56 L at 1.00 atm. What will be the volume of this gas if the pressure becomes 3.00 atm?
5. A gas occupies 11.2 liters at 0.860 atm. What is the pressure if the volume becomes 15.0 L?
6. 500.0 mL of a gas is collected at 745.0 mm Hg. What will the volume be at standard pressure?
7. Convert 350.0 mL at 740.0 mm of Hg to its new volume at standard pressure.
8. Convert 338 L at 63.0 atm to its new volume at standard pressure.
9. Convert 273.15 mL at 166.0 mm of Hg to its new volume at standard pressure.
10. Convert 77.0 L at 18.0 mm of Hg to its new volume at standard pressure.
11. When the pressure on a gas increases, will the volume increase or decrease?
12. If the pressure on a gas is decreased by one-half, how large will the volume change be?
13. A gas occupies 4.31 liters at a pressure of 0.755 atm. Determine the volume if the pressure is increased to 1.25 atm.
14. 600.0 mL of a gas is at a pressure of 8.00 atm. What is the volume of the gas at 2.00 atm?
15. 400.0 mL of a gas are under a pressure of 800.0 torr. What would the volume of the gas be at a pressure of 1000.0 torr?